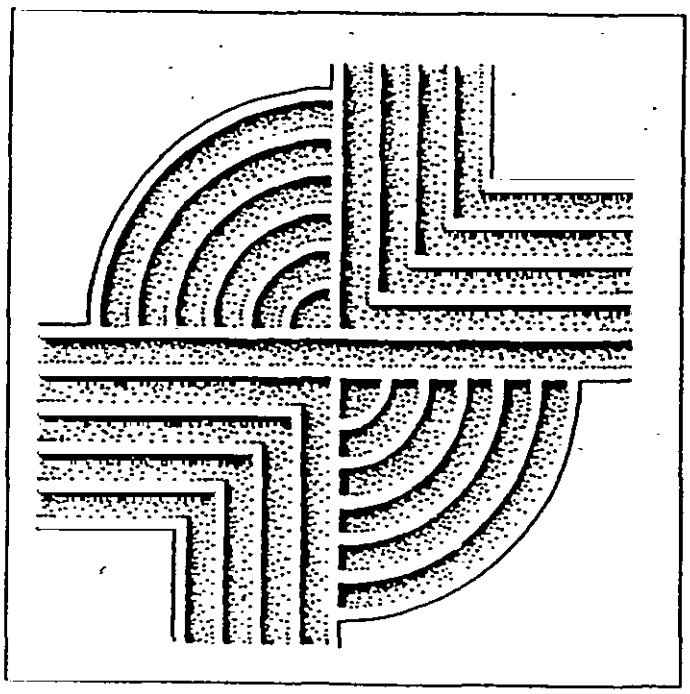
MANAGEMENT SUMMARY OF AN ARCHAEOLOGICAL SURVEY OF THE SPRING ISLAND PHASE 1 DEVELOPMENT, SPRING ISLAND, BEAUFORT COUNTY, SOUTH CAROLINA



RESEARCH CONTRIBUTION 40

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MANAGEMENT SUMMARY OF AN ARCHAEOLOGICAL SURVEY OF THE SPRING ISLAND PHASE 1 DEVELOPMENT, SPRING ISLAND, BEAUFORT COUNTY, SOUTH CAROLINA

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Chicora Research Contribution 40

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Introduction

This investigation was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Mr. Glen McCaskey, consultant to the developer of the 3500 acre (highland) Spring Island property (Callawassie Development Corporation). Spring Island is bordered to the north by the Chechessee River and the Chechessee Creek, to the east by the Chechessee and Colleton rivers, to the south by the Colleton River, and to the west by the Callawassie and Chechessee creeks. The island is separated from neighboring Callawassie Island by the Callawassie Creek, which runs north-south. The Broad River lies to the east of Spring Island (Figure 1).

Both Callawassie and Spring islands are currently owned and being developed by the same interest, the Callawassie Development Corporation. The current Phase 1 development on Spring Island, which is situated on the western shore of the island, will involve a series of 36 lots, each a minimum of 5 acres in size encompassing approximately 200 acres (Glen McCaskey, personal communication 1989). The survey tract includes 8400 linear feet along the marsh and an additional 7200 linear feet along major interior drainages. Also included in this tract will be a series of access roads and associates utilities, although information on these were not provided to Chicora until the completion of the field survey. The road network will include approximately 4.2 miles of roadway with an average right-of-way of 100 feet. This initial development, anticipated to begin early in 1990, will involve about 5.7% of the island's total high ground acreage.

The proposed work will involve the clearing, grubbing, filling, and paving of the road network; the construction of below ground utilities such as water lines, storm drainage, and sewer lines; as well as the development of individual lots. These activities will result in considerable land alteration with potential damage to archaeological and historical resources which may exist in the project area.

This summary is intended to provide a synopsis of the preliminary archival research and the archaeological survey of the Phase 1 tract; it is not intended to be a final report. The results of this work, and recommendations for additional work will be more fully discussed in the final report.

Based on discussions with the developer's consultant and the Staff Archaeologist with the State Historic Preservation Office at the South Carolina Department of Archives and History, it was determined that the scope of this study would involve a total of

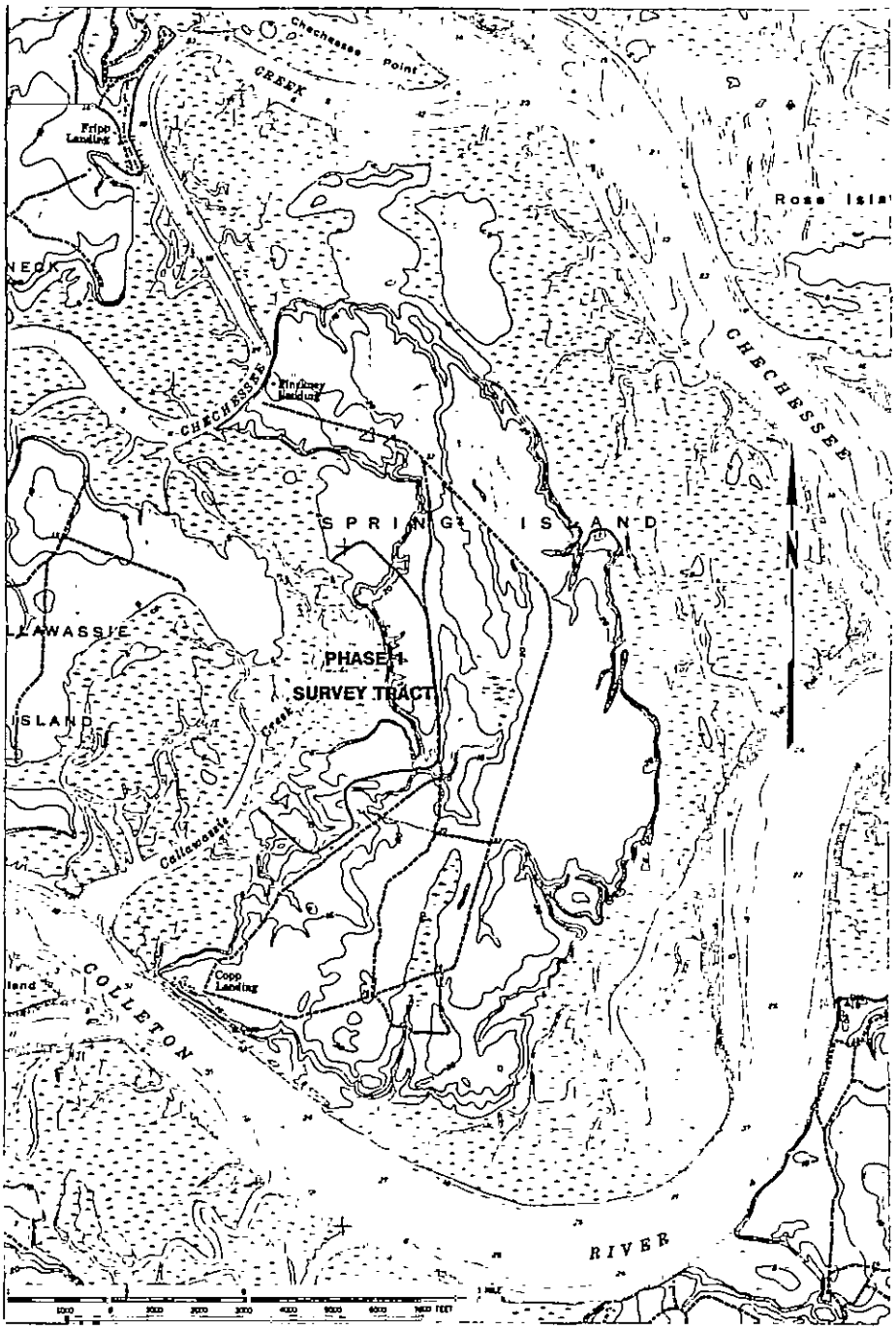

Figure 1. A portion of the Spring Island USGS map showing the project location.

12 days. Included in this estimate were five field days to survey the tract, and an additional 7 days to conduct more intensive auger tests at the recorded sites. Historical research was to be limited to a brief review of the existing historical sketch (Baldwin 1966). An agreement between Chicora Foundation and the developer was signed on October 6, 1989.

The historical research conducted by Chicora on this project, while originally anticipated to be a maximum of a day, was expanded to two days by the author and an additional two person days by Ms. Mona Grunden and Ms. Liz Pinckney. This additional work was necessary to complete the chain of title for the property and to verify aspects of the existing historic documentation. Sources consulted in this work include the Beaufort County RMC, the Charleston RMC, the Charleston Public Library (for the Charleston County WPA Will Books, other sources in the Charleston County Probate Court were inaccessible because of damage caused by the recent hurricane), and the South Carolina Historical Society. Mr. Colin Brooker and Ms. Mona Grunden also contributed significant information from their research at the National Archives. Additional research, however, is still required during a later phase of the Spring Island project at the South Caroliniana Library, the South Carolina Department of Archives and History, and the South Carolina Historical Society. Field work was conducted by Ms. Mona Grunden, Ms. Liz Pinckney, and the author from October 19 through November 3, 1989. This work required a total of 256 person hours.

Arrangements have been made to curate the collections from these investigations at The Environmental and Historical Museum of Hilton Head Island as Accession Number 1989.6. The artifacts have been cataloged as specimens ARCH 1474 through ARCH 1547. All field records will be provided to the institution on pH neutral, alkaline buffered paper and the photographic materials will be processed to archival permanence. Additional information on the processing and conservation of the artifacts may be found in a subsequent section of this management summary.

Effective Environment

Beaufort County is situated in the Lower Coastal Plain of South Carolina and is bounded to the south and southwest by the Atlantic Ocean, to the east by St. Helena Sound, to the north and northeast by the Combahee River, to the west by Jasper and Colleton counties and portions of the New and Broad rivers. The mainland primarily consists of nearly level lowlands and low ridges. Elevations range from about sea level to slightly over 100 feet above mean sea level (MSL) (Mathews et al. 1980:134-135).

The county is drained by four primarily coastal or saltwater river systems (the May, New, Broad-Pocotaligo-Coosawhatchie, and

Broad rivers) and one river with a significant freshwater discharge (the Combahee River), which pays a significant role in historic rice cultivation. Because of the low topography, however, many low gradient interior drainages are present as either extensions of tidal streams and rivers or flooded bays and swales. There are many diverse wetland communities influenced by tidal inundation and river flow. Upland vegetation is primarily pine or mixed hardwoods and pine, and only 15% of the county is currently cultivated (while about 5% of the total land area is urbanized) (Mathews et al. 1980:135).

The geology of the county is characteristic of the coastal plain, with unconsolidated water-laid beds of sands and clays up to 20 feet in thickness overlying thick beds of soft marl (Stuck 1980:3). Spring Island consists of primarily the Wando-Seabrook-Seewee soil associations which range from excessively well drained to somewhat poorly drained soils that are primarily sandy. Within the Phase 1 survey area nine series are present: Argent, Coosaw, Eddings, Eulonia, Murad, Seabrook, Wando, and Yonges (Stuck 1980:Map 75, 69). Of these, only the Eddings, Eulonia, Seabrook, and Wando soils are classified as moderately well drained to well drained; the remainder are all somewhat poorly drained to poorly drained. The field investigations, therefore, tended to emphasize the better drained soils.

On the Spring Island Phase 1 tract the elevations range from 7 to 22 feet with a bank about 2 to 8 feet high separating the island from the Callawassie Creek marsh. Vegetation includes forests of live oak, pine, hickory, and sweet gum dominating the area, although fallow agricultural fields, and fields of second growth pine are also present. Nowhere in the survey area was ground visibility greater than 50% and typically visibility ranged from 0 to 10%.

Background Research

This project involved limited historical or archival research for Spring Island, the results of which will be discussed in the final report. The previous work by Michie (1982) and Baldwin (1966) provides some preliminary background for the islands. Review of these documents and the published plats, however, reveals no documented historic period occupation in the Phase 1 survey area. Summaries of Beaufort area history are presented by Dabbs (1983), Johnson (1969), Trinkley (1986, 1987, 1988, and 1989), and Woofter (1930), while sources such as Pearson (1906) provide additional primary source documentation for the area. McGuire (1984) provides a detailed account of land ownership in the postbellum period. These sources should be consulted for additional information general to the Beaufort District.

Spring Island has been previously surveyed at a

reconnaissance level by Lepionka (1986), although this report has not been accepted by the State Historic Preservation Office to satisfy compliance requirements of the development (letter from Dr. Charles Lee, State Historic Preservation Officer to Mr. R.L. Powell, Davis and Floyd Engineers, dated June 24, 1986). Lepionka did identify a series of seven sites (several with multiple loci) within the Phase 1 development area. None of the materials resulting from this previous investigation have been curated and it is presumed that the notes and specimens are still in the possession of Lepionka. Chicora Foundation has requested through Mr. Glen McCaskey that the field notes and the artifacts from this previous work be provided to us for curation and integration into the final report on the Phase 1 tract.

To date, Lepionka has released no materials on the previous investigations except a copy of the manuscript report previously submitted to the State Historic Preservation Office. Mr. Colin Brooker graciously provided a copy of Baldwin's (1966) original Spring Island historical study, which had been partially incorporated into Lepionka's study. However, without access to field notes and collections from the initial study of Spring Island, we have been able to incorporate it in only a minimal fashion in the present study. The present study has found significant spatial deviations between the originally recorded sites and those identified on the basis of this intensive survey. With the assistance of Mr. Keith Derting, South Carolina Institute of Archaeology and Anthropology, we have submitted corrected site forms and have renumbered some of the previously identified sites. This work will be discussed in greater detail in a following section.

Field Methods

The initially proposed field techniques (discussed with Dr. Patricia Cridlebaugh, Staff Archaeologist with the South Carolina State Historic Preservation Office) involved the placement of shovel tests at 100 foot intervals along transects at 200 foot intervals through the study areas, with all fill being screened through 1/4-inch mesh. If evidence of an archaeological site was identified, the testing interval would be decreased to 50 feet in order to more accurately establish boundaries. In addition, Chicora would relocate the seven sites previously identified by Lepionka. At all sites, including those previously identified, Chicora would establish site boundaries, collect sufficient information to complete or revise site forms, and would assess and justify site eligibility for inclusion on the National Register of Historic Places. This phase of the work might include the use of transect auger testing at intervals less than the 100 foot spacing used for the shovel tests.

All soil would be screened through 1/4-inch mesh, with each test numbered sequentially. Each shovel test would measure about

1 foot square and would normally be taken to a depth of at least 1 foot. The auger tests were to use a 10-inch bit and were to be taken to a minimum depth of 2 feet. All cultural remains would be collected, except for shell, mortar, and brick, which would be qualitatively noted in the field and discarded. Notes would be maintained for profiles at any sites encountered.

This emphasis on shovel testing is required by the tract's extensive woods coverage, which was anticipated to severely restrict surface visibility. No effort was made to incorporate an examination of the marsh edge, which typically assists in site discovery, since it appeared that the initial survey by Lepionka relied extensively on this technique. The intensity of shovel testing was to be based on information concerning soil drainage, with areas of poorly drained soils receiving less intensive investigation.

These plans were put into effect with no significant variations. A total of 31 transects were established, with those on the southern two-thirds of the tract oriented northwest-southeast to keep them roughly parallel to the marsh, while those at the northern end of the tract were oriented east-west (Figure 2). With only one exception these transects were sequentially numbered from south to north and the tests along each transect are numbered from the shore to the inland area. These transects were typically 200 feet apart, although the distance between Transects 17 and 18 was only 100 feet and the distance between Transects 1 and 31 was 150 feet. The total number of possible shovel tests along the transects was 430; a total of 393 shovel tests were excavated with the remainder being located in very low, wet areas. Four previously identified sites were tested with an additional 55 shovel tests, typically at 20 foot intervals. An additional three sites received a total of 75 auger tests.

Although the original proposal indicated that all of the previously recorded sites would receive auger test surveys, upon field examination it became clear that several of the sites were clearly so ephemeral that this level of intensive investigation was unnecessary. In those cases we have relied on the transect shovel test survey to provide justification for the site assessments.

Surface collections were made from several of the sites, although generally ground visibility was too limited to make this approach a valid technique for boundary or artifact quantity studies. The surface materials, all from selective grab collections, are only able to provide some additional information on temporal periods.

Reference to Lepionka's report (Lepionka 1986) will reveal that he tended to lump a number of discrete site areas or loci

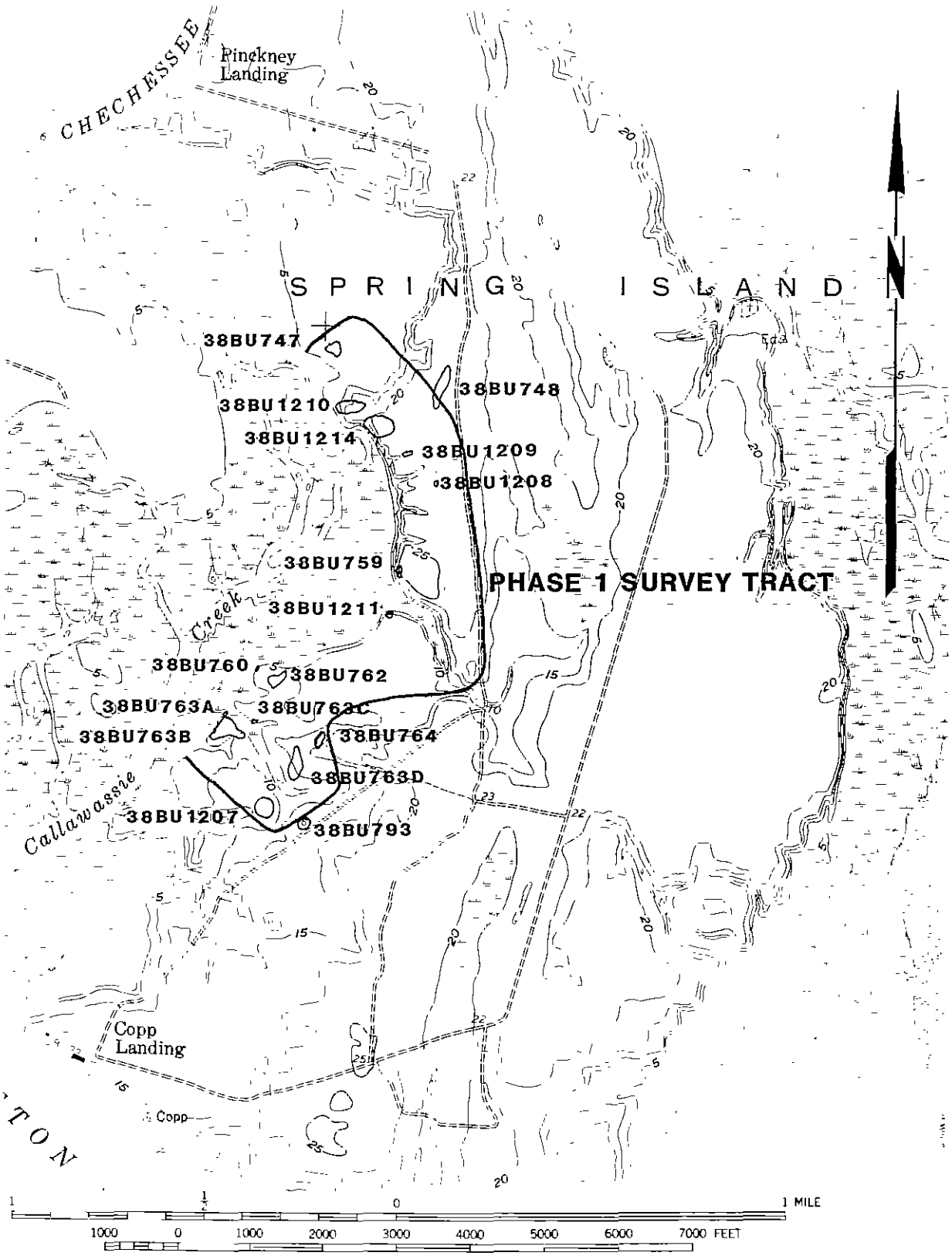

Figure 2. Phase 1 development tract and identified archaeological sites.

together, assigning a single site number. In some cases such sites are separated by considerable distances, while in other cases the loci joined together represent distinct temporal periods. While this practice does reduce the number of sites subject to compliance review, it tends to blur significant differences between the various loci. We have chosen to separate several of Lepionka's sites, coordinating these changes with the South Carolina Institute of Archaeology and Anthropology, which maintains the permanent state site files. A meeting was held with Mr. Keith Derting of that agency on October 31 and the revised site forms were submitted on November 1, 1989.

Laboratory Analysis

The cleaning and cataloging of artifacts was conducted in Columbia at the Chicora Foundation laboratory on November 4, 1989. Cataloging has used the format established by The Environmental and Historical Museum of Hilton Head Island. The collections are curated under Accession Number 1989.6 and specimen numbers ARCH 1474 through ARCH 1547. Artifact conservation has begun on ferrous artifacts as required by professional curation practices. Site forms have been filed with the South Carolina Institute of Archaeology and Anthropology, with copies provided to the State Historic Preservation Office and the developer's consultant. Field notes and photographic materials have been prepared for curation using archival standards and will be transferred to The Environmental and Historical Museum of Hilton Head Island as soon as the conservation of specimens is completed.

Analysis of the collections followed professionally accepted standards with a level of intensity suitable to the quantity and quality of the remains. Prehistoric ceramics were classified using common coastal South Carolina types (DePratter 1979; Trinkley 1983). The temporal, cultural, and typological classification of the historic remains followed Noel Hume (1969), Miller (1980), Price (1979), and South (1977).

Results

These investigations identified a total of 13 archaeological sites on the Phase 1 development tract. Four of these represent sites not previously identified by Lepionka, while the remainder represent loci previously identified.

Site 38BU747 is situated on the north edge of the Phase 1 development in the vicinity of the proposed bridge connecting Spring and Callawassie islands. The UTM coordinates are E515600 N3577100 and the site measures about 225 feet by 140 feet. Elevation in the site area ranges from 10 to 12 feet and the soils are Coosaw. It is located on the north edge of a small tidal slough and consists of at least two areas of primarily

oyster shell midden. This site has been previously identified by Lepionka as his Site 24, locus S59, although the location was misplaced on the various maps. It appears that Lepionka placed several shovel tests in this site, as well as a small excavation unit. Materials recovered during the Chicora survey include two Deptford Cord Marked sherds, both of which came from an area between the middens. No evidence of site damage was identified and site integrity appears high. A total of 16 shovel tests were excavated within the site boundaries and material has been recovered from a maximum depth of 1.1 feet.

This site represents a relatively small Deptford phase camp oriented toward shellfish collection. The site has the potential to yield information on Deptford settlement and subsistence activities. The site is recommended as eligible for inclusion on the National Register of Historic Places. Appropriate mitigation could include either green spacing or data recovery. If data recovery is necessary, at least two units should be placed within midden areas to recover subsistence data, while two additional units should be placed in non-midden areas to determine if features such as post holes or pits are present.

Site 38BU748 was originally recorded by Lepionka as Site 25. It is situated inland from the marsh at the northeast corner of the Phase 1 tract on excessively well drained Wando soils. The site elevation is 24 feet and the central UTM coordinates are E516120 N3576920. This site was investigated through a series of 15 shovel tests and the site boundaries, on the basis of this testing, have been established as 800 feet northeast-southwest by 200 feet east-west. This area was previously identified by Lepionka as Site 25.

The site incorporates several fields, now in second growth pine, and several mixed hardwood and pine forest areas. Artifacts recovered include one Deptford Plain, one Deptford Cord Marked, and one Stallings Plain from shovel tests. In addition, one Stallings Plain, one Deptford Plain, one Deptford Cord Marked, and one quartz anvil fragment were recovered from the surface. The shovel tests reveal extensive plow disturbance and no areas of clear site integrity could be identified. Shell middens were previously associated with the site, but are now thoroughly distributed through the fields and wooded areas. As a result, this site is recommended as not eligible for inclusion on the National Register and no further investigations are recommended.

Site 38BU759 consists of two area of shell midden associated with an extinct freshwater slough adjacent to the marsh in the middle of the Phase 1 tract. The central UTM coordinates are E515960 N3576180. The site loci are at an elevation of 5 to 8 feet and are associated with Eddings soils. Both middens are eroding from the bank in an area of mixed hardwood and pine vegetation. The northern locus measures about 75 by 10 feet,

while the southern locus measures 100 by 10 feet. These two middens were tested by a total of 20 shovel tests, but we were unable to identify any cultural remains further inland than about 6 feet. The southern midden had been recorded by Lepionka as Site 36, locus S56; the northern midden was apparently not recorded by Lepionka.

No materials were recovered from either midden, although it is probable that they represent small Middle Woodland occupations. Because the site has been heavily eroded and is today nothing more than a thin veneer of shell, 38BU759 is recommended as not eligible for inclusion on the National Register and no additional work is recommended.

Site 38BU760 is a small shell midden situated on a point of Murad sand at the south end of the Phase 1 development tract. The central UTM coordinates are E515375 N3575800 and the site elevation is about 5 feet. A series of eight shovel tests, placed in the site area, reveal that the midden does not extend inland more than 10 feet, while it extends about 100 feet along the marsh edge. The maximum depth of the shell midden is 0.3 foot, with it rapidly thinning out toward the southeast (inland). No artifacts were found associated with this midden, although it, like 38BU759, is thought to represent the Middle Woodland.

This site was originally identified by Lepionka as Site 37, although a more northern locus (identified as S54) could not be recovered during this survey. The site has been extensively eroded with only minimal midden left intact in the bank. The absence of cultural remains inland from the midden suggest that the site has been largely destroyed. Consequently, 38BU760 is recommended as not eligible for inclusion on the National Register of Historic Places and no further work is recommended.

Site 38BU762 is situated about 300 feet inland from 38BU760 in an area of heavy cultivation. The central UTM coordinates are E515460 N3575750 and the site is situated at an elevation of 13 feet on Murad soils. This site was originally recorded by Lepionka as Site 39, although the Chicora investigations have reduced its size and slightly shifted the site location. A series of 10 shovel tests were excavated at this site, establishing site boundaries of about 400 by 150 feet. The maximum depth of cultural remains was found to be 1 foot, with all materials recovered from the plowzone.

Only one specimen was recovered from this site, a Deptford Plain sherd. Based on the low density of artifacts and the highly plowed nature of the field, it appears that this site possesses a very low level of site integrity. It is recommended as not eligible for inclusion on the National Register and no further investigations are warranted.

Site 38BU763 is found at the south end of the Phase 1 tract surrounding a large tidal impoundment. This site was originally identified by Lepionka as Site 2 with no subdivision into various loci. These recent investigations have retained the original site number, but have divided the site into four loci, designated A through D. Locus A represents a small remnant shell midden adjacent to the marsh which has been damaged by the impoundment construction and which is now isolated on an artificial island. Locus B consists of a series of small shell middens to the south of the impoundment and adjacent to a small freshwater pond. Locus C, situated on the north side of the impoundment, is a small shell midden. Locus D, situated to the east of the impoundment, is a deeply plowed prehistoric midden with a historic component. The central UTM coordinates for loci A through C are E515240 N3575550, while the coordinates for locus D are E515540 N3575400. The various site areas are all found on Eddings soils and range in elevation from 5 to 10 feet.

Locus A has been tested by two shovel tests, each 1.5 feet square. These tests have produced primarily Early Woodland materials to a maximum depth of 3.1 feet. Recovered were 13 Stallings Plain sherds, one Thom's Creek Shell Punctate sherd, one Wilmington Cord Marked sherd, 12 unidentifiable sherds, eight animal bones, and one chert Savannah River projectile point fragment. Recovered from the surface of this locus were 22 Stallings Plain sherds, one Thom's Creek Plain sherd, one Thom's Creek Incised sherd, 12 unidentifiable sherds, and two baked clay object fragments. This locus covers an area about 50 feet square.

Locus B is found on a level area between the impoundment and a freshwater pond to the south of locus A. A series of 17 shovel tests were excavated in this area in order to establish site boundaries and also to obtain a small sample of artifacts. The site consists of several intact shell middens and additional areas of shell dispersed through construction and cultivation. Only two shovel tests produced temporally sensitive remains--one Deptford Cord Marked sherd and eight St. Catherines Cord Marked sherds. This site covers an area 400 feet north-south by 250 feet east-west.

Locus C is situated on the north side of the impoundment on a small point of low ground. The area consists of at least one intact shell midden about 0.4 foot in depth. Two shovel tests were excavated in this locus, although no artifacts were recovered. This site area is thought to cover about 30 feet in diameter.

Locus D is situated in a cultivated field to the east of the impoundment's southern tip. A series of 15 shovel tests were excavated in the site vicinity and an additional 31 auger tests were placed in the locus to further examine the area. While this

locus has produced primarily Middle Woodland sherds, there is also a historic component. Material recovered from the shovel tests includes one kaolin pipe bowl fragment, one colono sherd, one machine cut nail fragment, and three unidentifiable prehistoric sherds. A surface collection yielded two Deptford sherds, one brown bottle glass fragment, one aqua bottle glass fragment, and six mortar fragments with wattle or lathing impressions. The auger tests yielded one undecorated pearlware ceramic, one Colono ware sherd, one machine cut nail fragment, one unidentifiable nail fragment, seven Deptford Cord Marked sherds, six Deptford Plain sherds, 17 unidentifiable sherds, one chert flake, and one animal bone. In addition, the auger tests produced a small quantity of fired brick and additional examples of wattle impressed mortar fragments. This locus covers an area of 500 by 250 feet.

Although locus A has been damaged by the construction of the impoundment, the depth of deposits, the temporal period represented, and the abundance of faunal remains, indicates that the remnants of this site area are capable of yielding significant information about Early Woodland occupation on Spring Island. This locus, therefore is recommended as eligible for inclusion on the National Register and should either be green spaced or excavated. If green spacing is not practical, at least three 10-foot units should be excavated to recover a sample of the cultural remains present. Locus B, which represents a Middle Woodland shell midden, appears to have a high degree of site integrity and is capable of yielding information on both Middle Woodland settlement and subsistence questions. This area is also recommended as eligible for inclusion on the National Register and should also be green spaced or subjected to data recovery. Excavation at this site should include the examination of at least two spatially discrete shell middens, as well as several areas between middens. Locus C, although small, appears to represent an intact Middle Woodland shell midden similar to sites 38BU759 and 38BU760. At present, these small middens appear qualitatively distinct from the larger middens such as locus B and deserve additional investigation. Consequently, this locus is also recommended as eligible for inclusion on the National Register of Historic Places. Green spacing is the preferred alternative, although data recovery could be accomplished with the excavation of up to three 10-foot units.

The final locus (area D) appears to represent thoroughly plowed shell middens with little integrity. Of greater interest than the prehistoric remains, however, is the presence of the nineteenth century artifacts and mortar with wattle impressions. These historic remains can be isolated to a concentration measuring about 40 feet in diameter which is thought to represent the remains of a small structure. The artifacts recovered are indicative of a domestic use and the status of both the archaeological and architectural remains appears consistent with

a slave occupation. There is, however, no evidence of additional structures. Isolated slave structures are occasionally reported in historical accounts, although they are rarely recognized in archaeological research. While this locus has particular importance to our interpretation of the Spring Island plantation complex, the site appears to have lost its integrity through intensive cultivation. As a result, it is recommended as not eligible for inclusion on the National Register as a distinct portion of the overall site.

Site 38BU764 is situated about 200 feet to the east of site 38BU763D in a wooded area adjacent to a cultivated field. The central UTM coordinates are E515650 N3575520 and the site is found in an area of Eddings soil at an elevation ranging from 11 to 13 feet. Materials were found to cover an area measuring about 300 by 150 feet, although the site core could be defined in an area approximately 50 feet in diameter. This site was originally identified by Lepionka as Site 41, although this recent work does not incorporate his locus F97E since it is spatially distinct from 38BU764 and is situated outside the Phase 1 boundaries.

A series of 10 shovel tests, two of which produced specimens, were excavated within the site boundaries. Recovered were one Deptford Check Stamped sherd and one unidentifiable sherd.

The shell midden at this site is sparse and appears to have been heavily damaged by previous cultivation or logging. Artifact quantity and variety are low. As a result, this site is recommended as not eligible for inclusion on the National Register and no additional investigations are recommended.

Site 38BU1207 is situated on the at the south edge of the Phase 1 tract, about 400 feet southwest of 38BU763D. The central UTM coordinates are E515400 N3575250. The site is in a heavily wooded area on Eddings soils at an elevation of 13 feet. An impounded tidal slough is located about 200 feet to the northeast and separates this site from 38BU763D. Site boundaries have been established, on the basis of shovel and auger tests, to be about 300 by 300 feet.

This site represents a multicomponent site, with a thin veneer of shell midden covering the entire area. Portions of this midden have been heavily damaged by previous cultivation or logging, although a few areas exhibit some limited degree of integrity. A series of 15 shovel tests and 17 auger tests have been excavated at the site. The shovel tests yielded one iron buckle, one aqua panel bottle fragment, one unidentifiable metal fragment, one Thom's Creek Reed Punctate sherd, one Deptford Plain sherd, three Deptford Cord Marked sherds, two Deptford Incised sherds, three unidentifiable sherd, one chert flake, and two animal bones. The auger tests produced two black bottle glass

fragments, two aqua bottle glass fragments, one machine cut nail fragment, 12 Deptford Plain sherds, two Deptford Cord Marked sherds, one Deptford Check Stamped sherd, one Deptford Incised sherd, and two unidentifiable sherds. In addition, both the shovel and auger tests yielded mortar fragments with wattle impressions very similar to those found at 38BU763D.

The earliest occupation at this site appears to have been during the Early Woodland with use continuing through the Middle Woodland. This component contributed the shell midden found scattered across the site today. The historic component probably dates from the nineteenth century and in all respects appears to be identical to that identified at 38BU763D. Unfortunately, this site has also been heavily damaged by cultivation or logging and there is very limited site integrity. This site is recommended as not eligible for inclusion on the National Register of Historic Places and no further investigations are recommended.

Site 38BU1208 is situated in the middle of the Phase 1 tract and consists of a single positive shovel test. The central UTM coordinates are E516120 N3576550. The site is situated on Seabrook soils at an elevation of 20 feet. The site is in a forested area immediately west of a field in second growth pine. The single item recovered from the three shovel tests is a Deptford Incised sherd. The site has been estimated to cover an area 20 feet in diameter and there is no evidence of site integrity. As a result, this site is recommended as not eligible for inclusion on the National Register of Historic Places.

Site 38BU1209 is also situated in the central area of the Phase 1 development and is probably associated with an adjacent small spring-fed slough. The area is today moderately vegetated with an open understory. Soils in the site area are Eddings sands and the elevation is about 20 feet. The central UTM coordinates are E515980 N 3576660. A series of five shovel tests were excavated to establish site boundaries of 150 feet east-west by 30 feet north-south (with the site essentially oriented parallel to the marsh slough). A single Deptford Cord Marked sherd was recovered from these tests in an area of dense shell midden. The only other area of midden has been extensively damaged by recent land clearing.

This site appears to lack sufficient integrity to be considered eligible for inclusion on the National Register. Consequently, no further investigations are recommended for this site.

Site 38BU1210 is situated at the north end of the Phase 1 development tract, south of a tidal inlet. The central UTM coordinates are E515750 N3576860. Soils in the site area are Eddings sands and the elevation ranges from 16 to 19 feet. Adjacent to the marsh there is a low bluff with eroding shell. It

was based on this visible shell that Lepionka defined his Site 24, locus S58. To the north the topography gradually slopes to the slough. The site is characterized by a mixed hardwood and pine forest with a light understory. The site consists of a series of shell middens roughly oriented east-west, parallel to the slough. Site boundaries have been established based on the shovel tests and the site measures about 500 feet east-west by 200 feet north-south.

A series of 14 shovel tests were excavated within the site, yielding one Deptford Cord Marked sherd, two unidentifiable sherds, and one chert flake. A single Stallings Plain sherd was recovered from the surface of a clearing within the site area. As with other sites of this type, the few sherds recovered were found between shell middens, not within the middens.

This site represents an intact Middle Woodland site with a series of small, discrete shell middens. The site appears to exhibit a high degree of integrity and is capable of yielding information on Middle Woodland settlement and subsistence. The site is recommended as eligible for inclusion on the National Register of Historic Places. Green spacing is the preferred mitigation alternative, although if this is not possible, development impact to the site can be mitigated through data recovery. Excavations at this site should emphasize the excavation of up to three shell midden areas, with testing in adjacent non-midden areas.

Site 38BU1211 is a small shell midden adjacent to the south shore of an impounded tidal slough in the middle of the Phase 1 tract. Soils are Murad sands and the site elevation is 5 feet. The central UTM coordinates are E515920 N3576010. The site is characterized by salt-tolerant scrub vegetation and is eroding into the Callawassie Creek marsh. Lepionka identified this midden as Site 36, locus S55, lumping it with locus S56 (which has been assigned site number 38BU759).

The site has been tested with six shovel tests which revealed a dense midden of oyster and ribbed mussel covering an area 100 feet along the shore and continuing inland 30 feet. The midden has a maximum depth of 1.5 feet. While no prehistoric sherds were encountered in the midden, abundant charcoal was found. Lepionka has attributed this midden to non-cultural activity, specifically raccoons. This is an entirely implausible explanation for a midden of this size and depth which contains charcoal. It appears more likely that this is a specialized gathering site dating from the Middle Woodland period.

This site appears somewhat similar to sites such as 38BU759 and 38BU760, except that it has retained considerable integrity and has been subjected to only minor erosion. Since these small shoreline sites are qualitatively distinct from the larger groups

of shell middens at sites such as 38BU763B and 38BU1210, they pose significant questions regarding site settlement, function, and subsistence base. This site is recommended as eligible for inclusion on the National Register of Historic Places. Either green spacing or data recovery is appropriate mitigation to development.

Site 38BU1214 is a large cluster of shell middens located about 300 feet south of and spatially isolated from 38BU1210. The central UTM coordinates are E515890 N3576790 and the site is situated on Eddings sands at an elevation of 20 feet. This site was previously recorded by Lepionka as Site 24, locus S57, but has been given a new site number by this survey to keep it distinct from the other loci identified by Lepionka over an area of 1800 linear feet along the shore. The site is in an area of mixed hardwood and pine with a generally light understory. The site was initially recognized by Lepionka based on the eroding shoreline, although the extent of the site inland was not recognized until this current survey. Site 38BU1214 is situated on a sandy rise which gradually drops to the north and south. To the west there is a high bluff overlooking the Callawassie Creek marsh.

The site, which measures 600 by 300 feet, was investigated by 17 shovel tests and 27 auger tests. The shovel tests yielded one Stallings Plain sherd, six Deptford Plain sherds, and two Deptford Cord Marked sherds. The auger tests produced three Deptford Plain sherds and one Deptford Cord Marked sherd. At least three areas of dense shell midden have been identified within this site, although it is likely that at least a dozen middens probably occur in the site area. As with previous examples of these larger Middle Woodland middens, pottery tends to be associated with non-midden areas, rather than with the shell middens.

Site integrity at 38BU1214 is regarded as high. The discrete midden areas may represent either a temporal range of site use or discrete occupation areas within a more limited period of use. The site has the potential to contribute significant data regarding Deptford phase site settlement and subsistence. As a result, this site is recommended as eligible for inclusion on the National Register of Historic Places. If green spacing is impractical, this site should receive data recovery which investigates at least three distinct midden areas, as well as at least one area between middens.

Summary and Recommendations

As a result of the intensive archaeological survey of the 200 acre Phase 1 development tract on Spring Island, 13 archaeological sites were defined. Ten of these sites had been previously identified by Lepionka, although this current study

has resulted in major revisions of site boundaries and reassessments of site integrity and significance. A total of five archaeological sites are recommended as eligible for inclusion on the National Register of Historic Places. These four sites include 38BU747 (a Middle Woodland shell midden), 38BU763 (with Early through Middle Woodland shell middens), 38BU1210 (a large series of Middle Woodland shell middens), 38BU1211 (a small probable Middle Woodland shell midden isolated to the shore area), and 38BU1214 (a large series of Middle Woodland shell middens).

Discussions with Mr. Glen McCaskey suggest that several of these sites, specifically 38BU1211 and 38BU763C, can be green spaced. Two additional site loci, 38BU763A and 38BU763B, may be green spaced. The remaining three sites (38BU747, 38BU1210, and 38BU1214), either because of their location or size, are likely to be impacted by the Phase 1 development.

Green spacing is recognized as an appropriate, and often cost-effective mitigation measure for archaeological site conservation. Such green spacing, however, must ensure the permanent protection and integrity of the archaeological data. Six recommendations are offered if green spacing is to be considered. These provisions, however, are subject to the review and approval of the State Historic Preservation Office.

1. All site areas are to be blocked out in the field with a buffer sufficient to ensure complete protection of the remains.

2. All clearing within the areas must be conducted by hand. No heavy equipment may be used and all cut vegetation should be removed from the site area.

3. The areas must continue to be clearly defined during all phases of construction. No equipment will be allowed in these areas, or be allowed to use the areas as turn-arounds. The areas will not be used to stockpile supplies or be otherwise disturbed. All personnel, including contractor's personnel, should be strictly forbidden from entering the areas.

4. Any landscaping in the areas will be conducted by land and ground disturbance must be limited to the upper 0.2 foot of soil. No utilities, including sprinkler lines or shallow electrical cables will be placed through the areas.

5. Callawassie Development Corporation must develop a historic easement or protective covenant protecting those areas set aside in green spacing and this protection must be in perpetuity.

6. Appropriate security must be provided to ensure that no one digs or otherwise disturbs the various sites.

Recommendations regarding data recovery have been discussed with each specific site. Any data recovery at the sites will require a detailed mitigation plan to be submitted to the State Historic Preservation Office for their review and approval. In general, however, it will be important to investigate several areas within any of the sites to ensure that a representative sample has been obtained. In addition, it is likely that artifacts will be uncommon in the middens themselves. The major thrust of the data recovery within the middens should be the collection of shellfish remains from contexts suitable for specialized analysis. Such work should include investigation of seasonality, habitat reconstruction, evidence of selective pressures, and dietary contribution. It is essential that both midden and non-midden areas be equally investigated in order to balance subsistence data with settlement information. The non-midden areas are also more likely to produce temporally sensitive artifacts.

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